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ABSTRACT

This booklet is designed to help school food service personnel to familiarize young school children with a variety of cooked and raw vegetables. The nutritional importance of vegetables in children's diets is emphasized. Learning activities which focus on the visual qualities, nutritional value, and taste characteristics of different vegetables are outlined. Recipes for soup, salad, and salad dressing are provided. Additional nutrition education resources are also listed. (GC)

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DISCOVERING VEGETABLES

The Nutrition Education Guidebook for School Food Service Managers and Cooperators

For use with children ages 5 through 8

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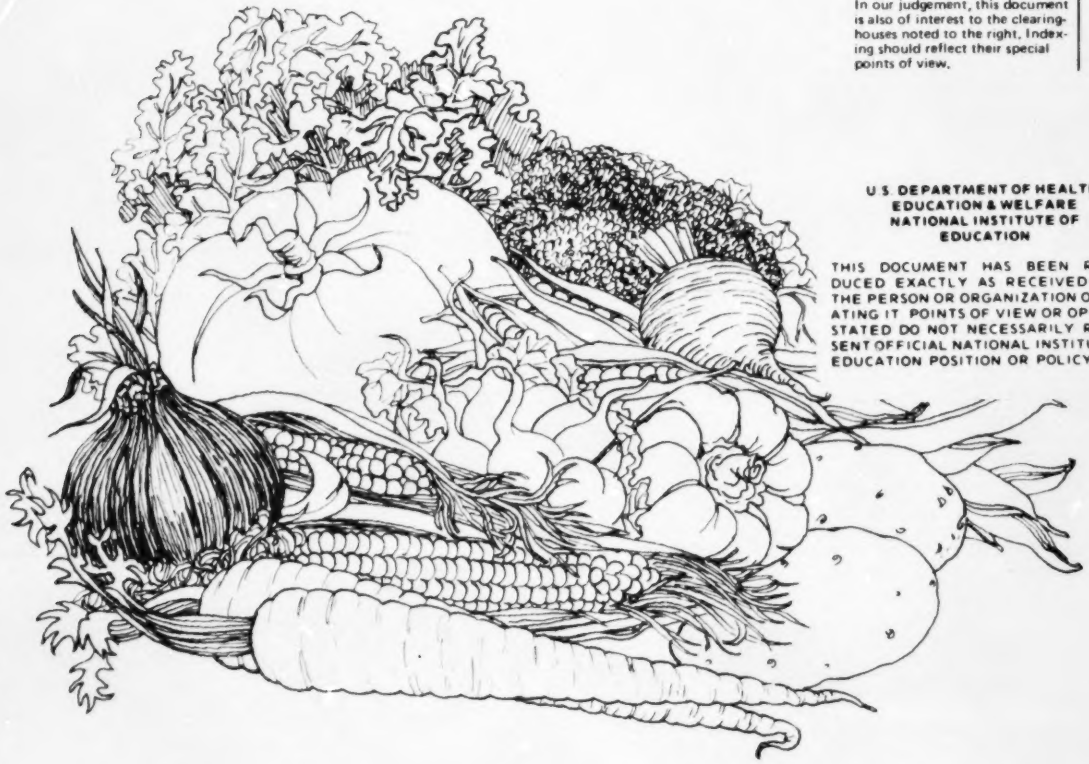

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DISCOVERING VEGETABLES

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DISCOVERING VEGETABLES
prepared by
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INTRODUCTION

To School Food Service Managers and Cooperators . . .

Together, you can plan and carry out the learning experiences this booklet suggests to help children from 5 to 8 years old learn about food. "Together"—that's the key word, for each of you will play an important role in developing these learning experiences. The school food service manager brings the ideas to life by having the children see, work with, and taste foods. The cooperator helps the children understand what different foods are available and helps them develop positive attitudes toward eating.

The learning activities in DISCOVERING VEGETABLES can help children understand that they need a wide variety of foods for good health and that meals served in child nutrition programs provide this variety. Since many 5 to 8 year olds "don't like vegetables" and refuse to eat them, this pamphlet focuses special attention on eating different types of vegetables.

To make children enthusiastic about discovering new foods, you must feel it's important for them to understand the kinds and amounts of foods they need for a balanced diet. Remember, enthusiasm is contagious. Do you feel it?

School Food Service Managers . . .

DISCOVERING VEGETABLES can help you work with interested cooperators to develop learning experiences for the children in your school. Several learning activities are directly related to the school food service program, like touring the cafeteria facilities and planning a Type A menu to be served in the lunch program. Several others relate to classroom activities such as food demonstrations or tasting parties.

Cooperators . . .

DISCOVERING VEGETABLES emphasizes teamwork between the school food service manager and you — concerned parents, teachers, principals, and others. If your school has no cafeteria, seek help from the school food service supervisor for the area, State, or region. The supervisor should be able to help set up nutrition education experiences related to your school food service program.

Working Together . . .

Together, school food service managers and cooperators can develop exciting nutrition education programs.

We hope that after working together on these learning experiences you will continue to cooperate to provide nutrition education for children in the child nutrition programs. These activities are just a start. The rest is up to you.

The following pages tell why vegetables are important for the young child and should be part of everyone's diet. The booklet also gives you the

necessary background for developing food-related learning experiences, especially for children ages 5 through 8.

WHAT'S SO IMPORTANT ABOUT EATING VEGETABLES ?

Vegetables are an important source of vitamins and minerals. Some vegetables supply vitamin C, vitamin A, and iron. Others are supplementary sources of B vitamins such as niacin, riboflavin, and thiamin.

The dark-green leafy vegetables such as kale, spinach, and collard greens are good sources of VITAMIN C. The body needs vitamin C to help bind cells together, to help build strong teeth, to keep gums healthy, to help the body resist infection, and to promote the healing of wounds and cuts.

Dark-green leafy vegetables and deep-yellow or orange vegetables such as carrots, winter squash, and sweetpotatoes are good sources of carotene, which the body can convert into VITAMIN A. Vitamin A helps keeps skin healthy, promotes growth and development, protects us from not being able to see well at night and helps the body build resistance to infection.

IRON, another important nutrient, is found in the dark-green leafy vegetables such as kale, spinach, broccoli, and collard greens, and also in dried peas and beans. Iron combines with protein to make hemoglobin, the red substance in the blood that carries oxygen from the lungs to the cells. A lack of iron can cause iron deficiency anemia.

Many other vegetables add variety to the diet. While some cannot be singled out as important sources of one particular nutrient, they all help build the day's quota of vitamins and minerals.

Vegetables are good sources of water in the diet. They provide necessary bulk which aids in digestion and elimination. One important plus is that most vegetables are low in calories while providing needed bulk (fiber).

Vegetables are great by themselves as snacks or as a complement to any meal. Served cooked, raw, or in juice form, they can add EYE APPEAL, INTERESTING FLAVOR, and TEXTURE to any meal.

OBJECTIVES

General Objective:

The child should be able to distinguish among a wide variety of foods with special emphasis on recognizing and eating a variety of vegetables.

Specific Objectives:

Upon full comprehension of the materials presented in this booklet, the child will:

- Be able to identify a variety of vegetables by color, shape, size, taste, and name.
- Be able to participate in the preparation of a variety of vegetables.
- Have tasted a variety of vegetables.
- Have increased his acceptance of vegetables served in the lunch program and at home.

LEARNING EXPERIENCES

How To Use The Learning Experiences:

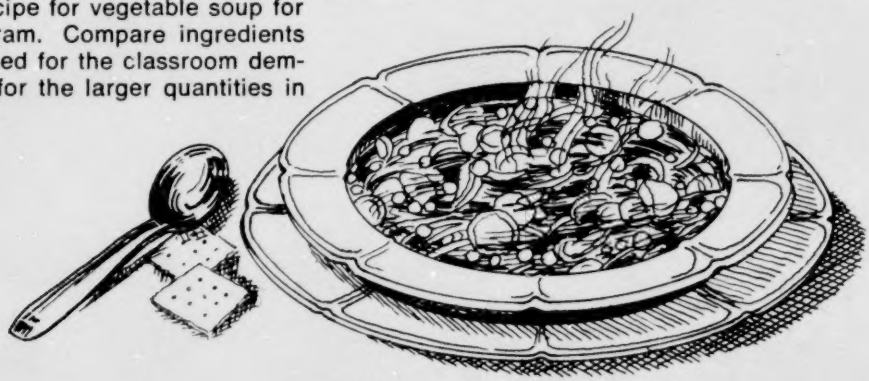
These learning experiences may be used as a separate unit or integrated into many other areas such as art, history, or social studies. It is important to adapt these activities for your children in your school. You may use several activities as a special unit on vegetables or use them singly throughout the year, depending on the age and ability of the children. The more activities the children undertake, the greater the opportunity for learning.

Tasks for the school food service manager are in the left column; for the cooperator, in the right. The numbers indicate single learning experiences and also show whether tasks are performed sequentially or simultaneously. Experiences are listed in suggested order of performance.

SCHOOL FOOD SERVICE MANAGER		COOPERATOR
	1	Talk with the children about the early explorers to the United States. Discuss how the explorers often ran out of fruits and vegetables during their long sea voyages, and what effect the lack of fruits and vegetables had on the explorers' health. Talk about the new foods such as corn and squash, that they discovered in the New World. Ask the children if they would like to go on an explorers' voyage to the local supermarket to discover all the different vegetables available there. If you are in a more rural area, a visit to a truck farm to see the vegetables growing would be a worthwhile experience.
Prepare for the cooperator a shopping list with a wide variety of vegetables. Select some that are familiar to the children and some that are not.	2	Ask the children to bring in pictures of several vegetables they would like to purchase.
If possible, go with the children to the grocery store. If a store is set up in the classroom, help the children identify the different vegetables.	3	Arrange to take children to the local market, supermarket, or farm, and have them pick out as many different vegetables as they can find. If it is not possible for the children to go on a field trip to the store, set up a play store in the classroom with real vegetables you have purchased.

SCHOOL FOOD SERVICE MANAGER	COOPERATOR
4	
Discuss with cooperator the best way to display vegetables.	From vegetables purchased, set up a display of several raw vegetables (about five or six will be enough). This experience may be repeated several times. Talk about each vegetable for a few minutes. Give children its name. Put a card with its name in front of each vegetable. Let children examine each one. Give child a mystery box containing one of the vegetables. Have him put his hand in the container and describe to the other children what he feels. Have the other children guess which vegetable is being described. Have a child put the correct answer on the board (check spelling).
5	
Set up a taste test for the children. On a plate, place whole raw vegetables discussed previously. Peel, chop, or cut the whole vegetables so the children can see what the inside looks like. Let the children take the cut pieces, feel them, and describe how they feel. Have children break the pieces in two, listening for the different sounds when the vegetables split. Ask, do they squish or crunch? Give children a bite-sized sample of each of the raw vegetables discussed. Let them describe how these vegetables feel in their mouths and what they taste like.	With the school food service manager, set up a taste test using vegetables discussed previously. Talk with children about how the vegetables taste. Discuss with children the fact that vegetables are a part of a growing plant. Through pictures or drawings, show what parts of plants are edible. Have the children tell which part of the plant the different vegetables come from.
6	
Prepare the cooked foods and place them on a heating unit for tasting later.	Display one vegetable in several different forms such as raw peas in a pod, canned green peas, frozen green peas, and dried peas. Have available for display cooked green peas and dried peas. Let the children examine the difference in color and texture between the raw and cooked product. Let everyone taste both products and describe how both taste and feel in their mouths. Ask which they prefer. Discuss changes in color, texture, and shape caused by cooking.
7	
Work with the cooperator to develop a shopping list for the food preparation lesson. Also discuss equipment needed. Recipes, shopping lists, and lists of equipment needed to prepare vegetable soup and salad are found on pages 12 and 13 of this pamphlet.	Discuss with the school food service manager which food preparation experience would be better for your class. With suggestions from the children, decide whether they should prepare vegetable soup or a salad.

SCHOOL FOOD SERVICE MANAGER		COOPERATOR
	8	Explain to each child what he will be doing to prepare the food. Discuss what will take place during the lesson.
Help set up the equipment and food for the lesson. If cooperators are unfamiliar with food preparation techniques, take a few minutes to demonstrate. If cooperators feel uncomfortable in this area, perhaps you could show the children how to clean, cut, crunch, tear, and crisp the vegetables. Show how to peel a carrot, slice a cucumber, tear lettuce, etc.	9	
	10	Have the children wash their hands thoroughly. This is a good opportunity to impress upon them the need for cleanliness in food preparation. Then, either by yourself or with the help of the school lunch manager, demonstrate to the children how to prepare the vegetables. Depending on the age and ability of children, have them finish preparing the foods for the lesson. (If taught properly, even very young children can safely handle paring knives. Sturdy plastic knives offer another safe alternative.)
As the children work, discuss with them the fact that many raw vegetables can be eaten as is and make good snacks. Then let them taste.	11	
SALAD If the children are going to make the raw salad, show them how to combine the vegetables. Make simple salad dressing. (See page 13 for recipe). Serve salad plain and with dressing.	12	Have children taste raw salad. Then have them taste salad with salad dressing. Discuss difference between texture and taste of salad with dressing and without. Ask the children which they prefer and why.

SCHOOL FOOD SERVICE MANAGER	COOPERATOR
12a	
	If the children make vegetable soup, discuss why we use recipes. Discuss how we know which ingredients and amounts to use. Explain how listed information tells us what to do with ingredients. Put the recipe on the blackboard. If the children can, have them copy it and take it home. Discuss the recipe for vegetable soup with children. What ingredients are listed? Hold up whole vegetables in the amount the recipe calls for. Discuss why other ingredients are included.
12b	
Show children how to prepare vegetables for soup. Show preparation techniques and how to use electric pan or hot plate. Have children discuss changes in flavor and texture occurring in the vegetables while cooking. Compare color and feel of raw and cooked vegetables. Let each child taste the finished products.	Have children prepare vegetables for soup. Cook soup. (See attached recipe on page 12).
12c	
Explain your recipe for vegetable soup for the lunch program. Compare ingredients and amounts used for the classroom demonstration and for the larger quantities in the lunchroom.	
13	
Discuss with the children how vegetables are cleaned, prepared, and cooked in the school lunch program. Discuss how food is ordered for the lunch program. In general terms, give children an idea of the size of the operation you run. Discuss with children the Type A Pattern. Discuss contributions vegetables make to the Type A Pattern: the requirement for ¾ cup of fruit and/or vegetables; vegetables' taste, texture, and eye appeal; and how they help to supply vitamin C, vitamin A, and iron.	

SCHOOL FOOD SERVICE MANAGER		COOPERATOR
Invite the children to come to the cafeteria to see how vegetable soup is prepared for lunch. Introduce the children to all the school food service workers. Give children a tour of the storage and preparation facilities. Ask workers to show how vegetable soup or salad is prepared for the lunch program. Show children what equipment is needed (huge pots, etc.), to cook soup or mix salad for the lunch program. Serve soup or salad for lunch. Discuss how soup or salad makes a contribution to the vegetable and fruit component of the Type A lunch.	14	
	15	Have each child bring from home a recipe using his favorite vegetable and a cut-out magazine picture of this vegetable. Have the children put together their own vegetable cookbook to be duplicated for a class project.
Review the requirements for Type A lunch with the children.	16	Ask children if they would like to plan a special Type A lunch featuring some of the vegetables they have discovered. Plan with the children a special Type A Menu featuring vegetables. Suggest a theme, such as new explorations like those done by the early settlers. Have children invite their parents to eat with them in the lunchroom. (Parents should pay the same price as teachers.)
Serve the menu the children plan. Publicize that it is a special menu planned by children.	17	
	18	Have the children discuss whether they liked the lunch that was served. Ask if they noticed whether their friends in other classes tasted the vegetables. Did they feel that the meal was a success? Have children write a thank-you note to the school lunch manager for helping prepare and serve the lunch. Use names of the vegetables served.

Remember, these ideas are just a beginning. With creativity and cooperation you can do much more: plant a garden, outdoors or inside; make coleslaw or stew; have a poster contest; make ice cream. The sky's the limit, so let's begin.

APPENDIX

EQUIPMENT NEEDED FOR A TASTE TEST:

Tray
Cutting board
Paring knife
Electric frying pan; electric heating unit plus 3 qt. pot (or electric pot)
Paper plates
Serving fork or spoon
Paper napkins
Raw, canned, frozen, and dried vegetables

This equipment could be placed on a moveable cart stored in the lunchroom and wheeled to the classroom.

Some vegetables which can be displayed in different forms are:

POTATOES: raw, mashed, flakes, dried hash browns, frozen french fries, baked, boiled

CORN: raw, on the cob, canned, frozen, popped, cornmeal, cereal, Indian

PEAS: fresh, canned, frozen, dried

VEGETABLE SOUP RECIPE (25 HALF CUP SERVINGS)

- 4 cups canned tomatoes
- ½ cup sliced carrots
- ¼ cup chopped celery
- 1 tablespoon salt
- 2 tablespoons butter or margarine
- 5 cups vegetable, beef, or chicken broth
- 1 cup frozen green peas
- 1 cup chopped cabbage

Simmer tomatoes, carrots, celery, salt, and fat in liquid about 35 minutes. Add peas and cabbage. Cook 5 minutes more.

Equipment Needed:

- Tray
- Cutting board
- Paring knife
- Measuring cup
- Electric heating unit with 3 qt. pot (or electric pot)
- Paper towels
- Disposable cups (for hot liquids)
- Plastic spoons
- Napkins
- Damp sponge
- Large spoon

Shopping List:

- 2 lb. canned tomatoes
- 1 small cabbage
- 1 bunch carrots
- 1 bunch celery
- salt
- butter or margarine
- 1 box broth mix or 3 cans broth
- 1 pkg. frozen peas

TOSSED SALAD RECIPE

Use fresh, crisp, raw vegetables. Tear leafy greens, such as lettuce or spinach, into bite-size pieces. Add small amounts of sliced, chopped, or cut-up vegetables such as cabbage, celery, onion, carrots, cauliflower, cucumbers, turnips, radishes, green peppers, or tomatoes. If desired, add vinegar and oil salad dressing.

HEARTY SALAD RECIPE

To Tossed Salad, add pieces of cheese or cooked meat, poultry, or fish.

SPINACH AND TOMATO SALAD RECIPE

Use bite-size pieces of raw spinach with cut-up tomatoes, celery, and onions. Add salad dressing and toss lightly to mix.

VINEGAR AND OIL SALAD DRESSING

1 teaspoon finely chopped onion
2 teaspoons vinegar
2 tablespoons sugar
2 tablespoons vegetable oil
¼ teaspoon salt
1 tablespoon catsup (if desired)

Put all ingredients in a small jar with a tight lid. Shake until well mixed.

Equipment Needed:

Tray
Cutting board
Paring knife
Measuring spoons
Small jar
Large bowl
2 large spoons
Plastic forks
Paper plates
Napkins
Damp sponge

Shopping List:

1 head lettuce
1 package spinach
1 head cabbage
1 bunch celery
2 small onions
1 bunch carrots
1 head cauliflower
2 cucumbers
2 turnips
1 bag radishes
2 green peppers
2 tomatoes
Vinegar
Vegetable oil
Salt
Sugar
Catsup

YOUR FOOD AND NUTRITION INFORMATION CENTER

Before beginning your program the school food service manager may want to contact the Food and Nutrition Information and Educational Materials Center (FNIC). The Center houses several hundred audio-visual and print materials related to school food service and nutrition education. The Center can provide the school food service manager with references to help arrange and carry out a program. In addition to materials on nutrition and nutrition education, the Center has materials covering the following areas: management and administration; education and training; menu planning and recipes; food preparation and production; equipment; sanitation and safety; and food purchasing, receiving, and storage

FNIC's Loan Service

Requests for materials may be placed by mail or telephone or in person. Allow ample time for delivery. Most print materials may be borrowed for a period of one month. Non-print media (films, slides, etc.) can be borrowed for two weeks only and no more than three copies can be loaned at any one time to one person. Non-print media can be scheduled no more than one month in advance. The center supplies franked labels for shipment both ways. Printed publications normally developed and distributed by the Department of Agriculture, State Experiment Stations, and State Agricultural Extension Services are on loan but free copies are not distributed through the Center. They may be obtained by writing directly to the USDA agency distributing the publications.

Here's How to Reach FNIC

Mail Address:	The Food and Nutrition Information and Educational Materials Center National Agricultural Library Room 304 Beltsville, Maryland 20705
Telephone:	(301) 344-3719 (24-hour telephone monitor)
Office Hours:	8:00-4:30 Monday-Friday
Street Address:	10301 Baltimore Boulevard Beltsville, Maryland 20705

NUTRITION EDUCATION RESOURCE MATERIALS

You can order nutrition education material for children from:

1. American School Food Service Association
   4101 East Iliff
   Denver, Colorado 80222

   Activity Fun with Foods, 1970 pamphlet, 21 p., 20 cents each; over 20 copies, 15 cents each.

   Yummy Rummy Game. Educational Game of Food and Nutrition for All Ages, 1970 game, 62 cards, boxed, $1.25 each; more than 10, $1.00 each.

2. Instructor Educational Service
   United Fresh Fruit and Vegetable Association
   Education Materials
   Box 510
   Dansville, New York 14437

   Jane and Jimmy Learn About Fresh Fruits and Vegetables, pamphlet, 12 p., kit of 35 pamphlets and teacher's guide, 25 cents.

3. Inquiry Department
   Scholastic Magazines
   904 Sylvan Avenue
   Englewood Cliffs, New Jersey 07632

   Bread & Jam for Frances, 60 cents.

   The Carrot Seed, 60 cents.

   What's for Lunch, Charlie?, 50 cents.

For additional reference materials write to:

4. Blue Goose, Inc.
   P.O. Box 46
   Fullerton, California 92632

   The Buying Guide for Fresh Fruits, Vegetables, and Nuts, 1967 Revised Edition, $2.00.

5. U.S. Department of Agriculture
   Office of Communication
   Washington, D.C. 20250

   Single copies free:

   How to Buy Fresh Vegetables, 1967, Order No. G-143.

   Family Fare: A Guide to Good Nutrition, 1972, Order No. G-1.

6. Pacific Coast Publishers
   Menlo Park, California 94025

   The Mother-Child Cookbook, An Introduction to Educational Cooking, 1970, Nancy J. Ferreira, $2.95.

7. Missouri Home Economics Association
   University of Missouri
   Columbia, Missouri 65201

   Teaching the Young Child Good Eating Habits for Life, $1.00.

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